

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A computer program product, tangibly embodied in a machine readable storage device, the computer program product comprising instructions operable to cause data processing apparatus to perform operations comprising:

receiving a plurality of process data items associated with a plurality of process instances that are executed using a plurality of components operating in a distributed computer system, each process data item comprising application data and having been collected by agents, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent associated with one of the components of the second set of components associated with each of the components;

comparing in accordance with a plurality of predefined rules each received process data item with one or more other received process data items to identify process data corresponding to process instances executed on the distributed computer system;

grouping into a first group a plurality of process data items corresponding to a the first process instance the first process instance being a single execution of a first sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items corresponding to a the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing the first and second process instances based on the process data items in the first and second groups, respectively, wherein reconstruction of the first and second process

~~instances begins during execution of the first and second process instances in the distributed computer system.~~

2. (Original) The computer program product of claim 1, wherein the operations further comprise:

modeling a process based on the reconstruction of the first process instance.

3. (Previously Presented) The computer program product of claim 1, wherein the operations further comprise:

monitoring the first process instance based on the process data items in the first group.

4.-9. (Canceled)

10. (Currently Amended) A computer program product, tangibly embodied in machine readable storage device, the computer program product comprising instructions operable to cause data processing apparatus to perform operations comprising:

receiving a specification of a predetermined condition;

upon the occurrence of the predetermined condition, using agents to collect collecting a plurality of process data items associated with a plurality of components operating in a distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent associated with one of the components of the second set of components each process data item comprising application data; and

transferring the process data items to a central system operable to discover and reconstruct the first and second process instances based on common application data found in the

process data items, the first and second process instances each being a single execution of a sequence of related steps carried out in the distributed computer system, ~~wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.~~

11. (Original) The computer program product of claim 10, wherein the operation of collecting the process data items occurs without modifying the component.

12. (Original) The computer program product of claim 10, wherein the operations further comprise:

receiving a specification of a second predetermined condition; and
upon the occurrence of the second predetermined condition, collecting additional process data items associated with the component.

13. (Original) The computer program product of claim 10, wherein the operations further comprise:

receiving a specification of a second component;
upon the occurrence of another predetermined condition, collecting other process data items associated with the second component; and
transferring the other process data items to the central system.

14. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

collecting a plurality of process data items associated with a plurality of components operating in a distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in

each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent associated with one of the components of the second set of components each process data item comprising application data associated with respective components of the plurality of components;

transferring the process data items from the agents agent to a central system;

comparing in accordance with a plurality of predefined rules each transferred process data item with one or more other transferred process data items to identify process data corresponding to process instances executed on the distributed computer system;

grouping into a first group in the central system a plurality of process data items corresponding to a the first process instance, the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items corresponding to a the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing the first and second process instances based on the process data items in the first and second groups, respectively, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.

15. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

receiving a plurality of process data items associated with a plurality of components operating in a distributed computer system, each process data item comprising application data and having been collected by agents an agent, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in

each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent associated with one of the components of the second set of components;

comparing in accordance with a plurality of predefined rules each received process data item with one or more other received process data items to identify common application data;

grouping into a first group a plurality of process data items having common application data that corresponds to a the first process instance, the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items having common application data that corresponds to a the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing the first and second process instances based on the process data items in the first and second groups, respectively, ~~wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.~~

16. (Original) The method of claim 15, wherein the method further comprises:
modeling a process based on the reconstruction of the first process instance.
17. (Previously Presented). The method of claim 15, wherein the method further comprises:
monitoring the first process instance based on the process data items in the first group.
18. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:
receiving a specification of a predetermined condition;
upon the occurrence of the predetermined condition, using agents to collect collecting a

plurality of process data items associated with components operating in a distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent associated with one of the components of the second set of components each process data item comprising application data; and

transferring the process data items to a central system operable to discover and reconstruct the first and second process instances based on common application data found in the process data items, the first and second process instances each being a single execution of a sequence of related steps carried out in the distributed computer system, wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.

19. (Currently Amended) An apparatus comprising:

means for receiving a plurality of process data items associated with a plurality of components operating in a distributed computer system, each process data item comprising application data and having been collected by agents, an agent wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent associated with one of the components of the second set of components;

means for comparing, in accordance with a plurality of predefined rules, each received process data item with one or more other received process data items to identify common application data;

means for grouping into a first group a plurality of process data items having common application data that corresponds to a the first process instance, the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

means for grouping into a second group a plurality of process data items having common application data that corresponds to a the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

means for reconstructing the first and second process instances based on the process data items in the first and second groups, respectively, ~~wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.~~

20. (Original) The apparatus of claim 19, further comprising:

means for modeling a process based on the reconstruction of the first process instance.

21. (Canceled)

22. (Currently Amended) A system for monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the system comprising:

means for receiving a specification of a predetermined condition;

means agents for, upon the occurrence of the predetermined condition, collecting a plurality of process data items associated with a plurality of components operating in a distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, and wherein the agents include at least a first agent associated with one of the components of the first set of components and at least a second agent

associated with one of the components of the second set of components each process data item comprising application data; and

means for transferring the process data items to a central system operable to discover and reconstruct the first and second process instances based on common application data found in the process data items, the first and second process instances each being a single execution of a sequence of related steps carried out in the distributed computer system, ~~wherein reconstruction of the first and second process instances begins during execution of the first and second process instances in the distributed computer system.~~

23.-26. (Canceled)

27. (New) The computer program product of claim 1, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

28. (New) The computer program product of claim 10, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

29. (New) The method of claim 14, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

30. (New) The method of claim 15, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

31. (New) The method of claim 18, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

32. (New) The apparatus of claim 19, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

33. (New) The system of claim 22, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.